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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,011	07/14/2003	James Michael Halek	E21-006-01-US	6038
22854	7590	02/02/2006	EXAMINER	
MOORE, HANSEN & SUMNER, PLLP 225 SOUTH SIXTH ST MINNEAPOLIS, MN 55402			WIMER, MICHAEL C	
			ART UNIT	PAPER NUMBER
			2828	
DATE MAILED: 02/02/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/619,011

Applicant(s)

HALEK ET AL.

Examiner

Michael C. Wimer

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kartchner (5914014) in view of Araya et al. (6583394).

Regarding Claims 20 and 43, Kartchner discloses a demulsification arrangement to remove microwave-absorptive material from a substrate comprising a containment structure 2; and an RF applicator 16 delivered from the power source (not shown) operatively coupled and positioned within the containment structure 2 and comprising an antenna body defined as a waveguide, having a longitudinal axis along the RF energy 18. The outer surface of the antenna 16 includes RF transparent, cylindrical windows and Kartchner teaches in col. 5, lines 17-19 that the apertures/windows may be rectangular in shape. Thus, Araya et al. are cited as resolving the level of ordinary skill in the art and as evidence of obviousness, and teaches in Fig. 4, a waveguide antenna applicator defined as slotted waveguides 12a arranged with slots perpendicular to the axis (vertically in the figure). It would have been obvious to the skilled artisan to employ such a rectangular slotted waveguide of Araya et al. in lieu of the

cylindrical one in Kartchner, particularly since rectangular applicators are suggested therein.

Regarding Claims 21 and 44, Kartchner suggest that conical applicators are well known in the art in col. 2, lines 32-35. It would have been obvious to employ such a shape as the applicator.

Further regarding Claims 22-42 and 45-64, the size shaping and composition of the waveguide the dielectric window (e.g., PTFE or fiberglass) with low permittivity are all common materials employ in RF applicators in heaters and antennas. Constructive interference is maintained due to the reflectors 5 in Kartchner. A skilled artisan would have found it obvious to employ any type hydrocarbon material, where the emulsion and substrate is water and oil.

### ***Response to Arguments***

3. Applicant's arguments filed 11/03/2005 have been fully considered but they are not persuasive. Specifically, the applicators in Figures 4 and 5 of Araya et al. define waveguides that have slot radiators. The improvement in Araya et al.--Fig.5 shows a particular slot arrangement as compared to Fig. 4 therein. The embodiments of either figure show the waveguide applicator where Fig. 5 shows a more refined slot arrangement/pattern. In some applications, non-uniformity in the radiation pattern may be acceptable and well within acceptable tolerances for the particular use. There is no teaching away from the use of the waveguide in Fig. 4. It is a mere suggestion and acknowledgment of the prior art arrangement. The rejection stands.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

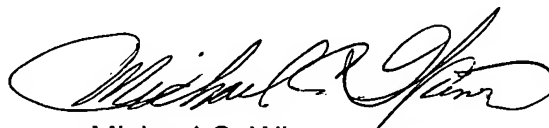
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Michael C. Wimer", with a stylized flourish at the end.

Michael C. Wimer  
Primary Examiner  
Art Unit 2828

MCW  
01/18/2006